bio-protocol Preprint

Not Peer Reviewed
Ask a question online

In vitro SIRT6 deacetylation assay

MQ Minxian Qian BL Baohua Liu

Updated date: Jun 27, 2021

An abbreviated version of this protocol was published in Nucleic Acids Research in Apr 2020

Deacetylase-independent function of SIRT6 couples GATA4 transcription factor and epigenetic activation against cardiomyocyte apoptosis

DOI: 10.1093/nar/gkaa214

Detailed protocol

It's my honor to receive your email, We used Abcam's SIRT6 Activity Assay Kit (Fluorometric) measures the activity of SIRT6 by the basic principle of changing a SIRT6 reaction into the activity of the peptidase In this kit, fluorophore and quencher are coupled to amino terminal and carboxyl terminal of substrate peptide, respectively, and before reaction of deacetylase, the fluorescence cannot be emitted. However, if SIRT6 performs deacetylation, substrate peptide will become cut by the action of peptidase added simultaneously, quencher will separate from fluorophore, and fluorescence will be emitted. **Deacetylase enzyme activity is measured by measuring this fluorescence intensity.** using 96wells plate with excitation at 480-500 nm and emission at 520-540 nm. Numerous extraction and purification methods can be used to isolate SIRT6. We purified GST-SIRT6 protein in vitro, and then incubated it with our designed peptide. The fluorescence intensity of SIRT6 substrate reflected the deacetylase activity of SIRT6。The specific time of reaction and incubation conditions are shown in the manual

Related files

ab156068 SIRT6 Activity Assay Kit v2a (website).pdf

How to cite:（Readers should cite both the Bio-protocol preprint and the original research article where this protocol was used）

1. Qian, M. and Liu, B. (2021). In vitro SIRT6 deacetylation assay. Bio-protocol Preprint. bio-protocol.org/prep1216.
2. Peng, L., Qian, M., Liu, Z., Tang, X., Sun, J., Jiang, Y., Sun, S., Cao, X., Pang, Q. and Liu, B.(2020). Deacetylase-independent function of SIRT6 couples GATA4 transcription factor and epigenetic activation against cardiomyocyte apoptosis. Nucleic Acids Research 48(9). DOI: 10.1093/nar/gkaa214

Copyright: Content may be subjected to copyright.